

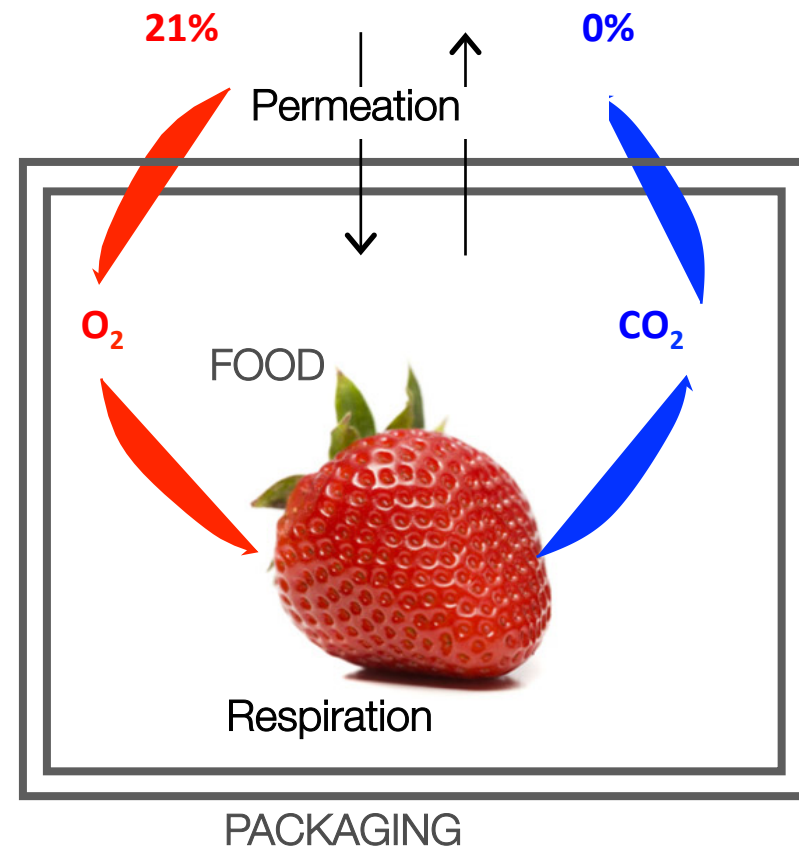
# Modified Atmosphere Packaging for fresh produce

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# ECOBIOCAP A Decision Support System ...

EcoBioCap - Optimize permeabilities

**Food properties**

Apple fresh-cut Annurca

Mass (kg):

Shelf life (day):

Temperature (°C):

Optimal atmosphere value:

O2 (%):

CO2 (%):

Respiration properties:

RRO2 max (mmole/kg/h):

RQ (RRCO2 / RRO2):

KmO2 (Pa):

KiCO2 (Pa):

**Packaging geometry**

Surface (cm<sup>2</sup>):

Volume (l):

run simulation

clear

Permeance O2 (mol.m-2.s-1.Pa-1)

Permeance CO2 (mol.m-2.s-1.Pa-1)

Permeability O2 (mol.m-1.s-1.Pa-1 - 50 µm)

Permeability CO2 (mol.m-1.s-1.Pa-1 - 50 µm)

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**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O2 permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO2 permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegradability	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	transparent translucent opaque				<input type="checkbox"/>	<input type="checkbox"/>

rank packagings

# ECOBIOCAP *A Decision Support System ...*

Chose of a fresh produce among a list of possibilities

Ecobiocap - Optimize permeabilities

**Food properties**

Endive

- Apple fresh-cut Annurca
- Apricot A3844
- Apricot Bergeron
- Artichoke
- cucumber
- Endive**
- Lettuce Lactuca sativa L.
- Mushroom Agaricus bisporus Lange
- Onion Allium cepa
- Strawberry Charlotte
- Strawberry Fragaria x ananassa Duchesne
- Tomato Grace

KmO2 (Pa): 9260

KCO2 (Pa):

**Packaging geometry**

Surface (cm<sup>2</sup>):

Volume (l):

run simulation

clear

Permeance O2 (mol.m-2.s-1.Pa-1)

Permeance CO2 (mol.m-2.s-1.Pa-1)

Permeability O2 (mol.m-1.s-1.Pa-1 - 50 µm)

Permeability CO2 (mol.m-1.s-1.Pa-1 - 50 µm)

---

**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O2 permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO2 permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegradability	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	transparent translucent opaque		<input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/>			

# ECOBIOCAP A Decision Support System ...

EcoBioCap - Optimize permeabilities

**Food properties**

Endive ▾

Mass (kg):

Shelf life (day):

Temperature (°C):

Optimal atmosphere value:

O<sub>2</sub> (%):

CO<sub>2</sub> (%):

Respiration properties:

RRO<sub>2</sub> max (mmole/kg/h):

RQ (RRCO<sub>2</sub> / RRO<sub>2</sub>):

KmO<sub>2</sub> (Pa):

KmCO<sub>2</sub> (Pa):

**Packaging geometry**

Surface (cm<sup>2</sup>):

Volume (l):

Permeance O<sub>2</sub> (mol.m-2.s-1.Pa-1)

Permeance CO<sub>2</sub> (mol.m-2.s-1.Pa-1)

Permeability O<sub>2</sub> (mol.m-1.s-1.Pa-1 - 50 μm)

Permeability CO<sub>2</sub> (mol.m-1.s-1.Pa-1 - 50 μm)

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**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O <sub>2</sub> permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
CO <sub>2</sub> permeance	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Temperature	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="checkbox"/>	<input type="checkbox"/>
Biodegradability	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<input type="text" value="transparent"/> <input type="text" value="translucent"/> <input type="text" value="opaque"/>				<input type="checkbox"/>	<input type="checkbox"/>

# ECOBIOCAP *A Decision Support System ...*

Fill in the data required for packaging geometry then run the simulation

EcoBioCap - Optimize permeabilities

**Food properties**

Endive

Mass (kg): 0.5

Shelf life (day): 7

Temperature (°C):

Optimal atmosphere value:

O2 (%): 5

CO2 (%): 4

Respiration properties:

RRO2 max (mmole/kg/h): 1.1833729665147

RQ (RRCO2 / RRO2): 0.74

KmO2 (Pa): 9260

**Packaging geometry**

Surface (cm<sup>2</sup>): 600

Volume (l): 1

run simulation

clear

Permeance O2 (mol.m-2.s-1.Pa-1): 5.777244e-11

Permeance CO2 (mol.m-2.s-1.Pa-1): 1.792195e-10

Permeability O2 (mol.m-1.s-1.Pa-1 - 50 µm): 2.888622e-15

Permeability CO2 (mol.m-1.s-1.Pa-1 - 50 µm): 8.960976e-15

---

**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O2 permeance	4.044071e-11	5.19952e-11	6.354968e-11	7.510417e-11	<input checked="" type="checkbox"/>	<input type="checkbox"/>
CO2 permeance	1.254537e-10	1.612976e-10	1.971415e-10	2.329854e-10	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Temperature	14	18	22	26	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Biodegradability	<input type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	transparent translucent opaque				<input type="checkbox"/>	<input type="checkbox"/>

rank packagings

# ECOBIOCAP A Decision Support System ...

Building of the multi-criteria request ...

**Food properties**

Endive

Mass (kg): 0.5

Shelf life (day): 7

Temperature (°C):

Optimal atmosphere value:

O2 (%): 5

CO2 (%): 4

Respiration properties:

RRO2 max (mmole/kg/h): 1.1833729665147

RQ (RRCO2 / RRO2): 0.74

KmO2 (Pa): 9260

KiCO2 (Pa):

**Packaging geometry**

Surface (cm<sup>2</sup>): 600

Volume (l): 1

run simulation

clear

Permeance O2 (mol.m-2.s-1.Pa-1) 5.277244e-11

Permeance CO2 (mol.m-2.s-1.Pa-1) 1.792195e-10

Permeability O2 (mol.m-1.s-1.Pa-1 - 50 µm) 2.888622e-15

Permeability CO2 (mol.m-1.s-1.Pa-1 - 50 µm) 8.960976e-15

**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O2 permeance	4.044071e-11	5.19932e-11	6.354968e-11	7.510417e-11	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
CO2 permeance	1.254537e-10	1.612976e-10	1.971415e-10	2.329854e-10	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
Temperature	14	18	22	26	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
Biodegradability	<input checked="" type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	transparent opaque		translucent		<input type="checkbox"/>	<input type="checkbox"/>

rank packagings

# ECOBIOCAP A Decision Support System ...

## Ranking of the most suitable materials

**Preferences associated with criteria**

allow the ranking of packagings with unknown values for mandatory criteria

	enlarge min	min	max	enlarge max	mandatory	optional
O2 permeance	4.044071e-11	5.19952e-11	6.354968e-11	7.510417e-11	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
CO2 permeance	1.254537e-10	1.612976e-10	1.971415e-10	2.329854e-10	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
Temperature	14	18	22	26	<input checked="" type="checkbox"/> 1	<input type="checkbox"/>
Biodegradability	<input checked="" type="checkbox"/>				<input type="checkbox"/>	<input type="checkbox"/>
Transparency	<div style="display: flex; border: 1px solid #ccc; padding: 2px;"> <div style="border-right: 1px solid #ccc; padding: 2px;">transparent opaque</div> <div style="padding: 2px;"> <input checked="" type="checkbox"/> translucent           </div> </div>				<input type="checkbox"/>	<input type="checkbox"/>

---

**Packagings ranking**

ranking	name	type	% known value
1	PP + Corn-zein	Polypropylene	66
2	PP + Corn-zein	Polypropylene	66
3	HPC/Lipids	Polysaccharides	66
4	PF	Polynolefin	66

# Importance of input parameters and databases

## Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect of Relative Humidity and Temperature

H. Mujica-Paz and N. Gontard\*

ENSIA/CIRAD, B.P. 5098, 1101 avenue Agropolis, 34033 Montpellier Cedex 01, France

**Table 2. Central Composite Design Arrangement and Responses**

variable levels		responses		
$T$ (°C)	RH (%)	CO <sub>2</sub> permeability ( $\text{amol s}^{-1} \text{m}^{-1} \text{Pa}^{-1}$ )	O <sub>2</sub> permeability ( $\text{amol s}^{-1} \text{m}^{-1} \text{Pa}^{-1}$ )	select- ivity
9	14.6	258	111	2.3
39	14.6	314	131	2.4
9	85.3	11475	1011	11.3
39	85.3	22353	863	25.9
3	50	317	181	1.7
45	50	1026	233	4.4
24	0	88	77	1.1
24	100	55580	1970	28.2
24	50	536	159	3.3
24	50	545	152	3.5



# Importance of input parameters and databases

A	E	F	G	H	I	J	K	L	M	N	O	P
REFERENCE	COMMERCIAL NAME or NAME	MATERIAL TYPE	Applicati on	O2 permeability		O2 perm unit	O2 perm RH		RH unit	O2 perm Temperature		Temperatur e unit
				min	max		min	max		min	max	
BASF The Chemical Company	Ecoflex FBX 7011	Aliphatic-aromatic copolyester based on the monomers 1, 4 butanediol, adipic acid, terephthalic acid for film extrusion		1400	1400	cm <sup>3</sup> /(m <sup>2</sup> .d.bar)	0	0	%	23	23	°C
BASF The Chemical Company	Ecovio LBX 8180	Product containing renewable resources, is basically a compound of our biodegradable copolyester Ecoflex FBX 7011 and polylactic acid (PLA)		30	30	cm <sup>3</sup> /(m <sup>2</sup> .d.bar)	0	0	%	23	23	°C
Sanchez-Garcia et al 2008	PHB blend	PHB/PCL, 80:20 wt/wt		4.1995E-19	4.2005E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	0	0	%	24	24	°C
Sanchez-Garcia et al 2008	PHB blend	PHB/PCL, 80:20 wt/wt		5.196E-19	5.204E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	80	80	%	24	24	°C
Sanchez-Garcia et al 2008	NanoterPHB-Blend	1% of wt (Nanoter™ 2212) based on Kaolinite in PHB blend (PHB/PCL, 80:20 wt/wt)		3.5E-19	4.1E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	0	0	%	24	24	°C
Sanchez-Garcia et al 2008	NanoterPHB-Blend	1% of wt (Nanoter™ 2212) based on Kaolinite in PHB blend (PHB/PCL, 80:20 wt/wt)		3.8E-19	4E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	80	80	%	24	24	°C
Sanchez-Garcia et al 2008	NanoterPHB-Blend	4% of wt (Nanoter™ 2212) based on Kaolinite in PHB blend (PHB/PCL, 80:20 wt/wt)		2.1E-19	2.7E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	0	0	%	24	24	°C
Sanchez-Garcia et al 2008	NanoterPHB-Blend	4% of wt (Nanoter™ 2212) based on Kaolinite in PHB blend (PHB/PCL, 80:20 wt/wt)		2.6E-19	3E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	80	80	%	24	24	°C
Sanchez-Garcia et al 2008	PHB	Material with density 1,25 g/cm <sup>3</sup> is a metl-processable semicrystalline thermoplastic polymer made form renewable carbohydrate feedstocks		2.298E-19	2.302E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	0	0	%	24	24	°C
Sanchez-Garcia et al 2008	NanoterPHB	4% of wt (Nanoter™ 2212) based on Kaolinite in PHB		1.5E-19	2.1E-19	m <sup>3</sup> .m/(m <sup>2</sup> .s.Pa)	0	0	%	24	24	°C
Sanchez-Garcia et al 2008	P									4	24	°C
Sanchez-Garcia et al 2008	P									4	24	°C
Sanchez-Garcia et al 2008	P									4	24	°C
PropaFresh	P									3	23	°C

@Web

Ontology

Documents

Query

# @Web - a software to capitalise data

The screenshot displays the @Web software interface. On the left is a vertical navigation menu with various categories, including 'Oxygen and Carbon Dioxide Permeability' which is highlighted in red. The main content area is titled 'Documents' and shows details for a specific document. The document's name is 'Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect of Relative Humidity and Temperature'. Other details include authors (H. Mujica-Paz and N. Gontard), journal (J.Agric.FoodChem.), year (1997), volume (45), and issue (none). The interface also shows 'Document's general information' and 'Document's criteria values' sections.

Valer

Logout

Mana

Ontology Documents Query

on about : Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect of Relative Humidity and Temperature

Document's general information

Document's name :  
Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect of Relative Humidity and Temperature

Topic associate : PackPermeability

Ontology associate : MAPOPT

Accepted Tables : 2

Rejected Tables : 0

Untreated Tables : 0

Table Management

Authors : H. Mujica-Paz and N. Gontard

Journal : J.Agric.FoodChem.

Year : 1997

Volume : 45

Issue : none

URL : none

Download PDF File

Document's criteria values

















# CAPITALISATION

**Table 2. Central Composite Design Arrangement and Responses**

variable levels		responses		
T (°C)	RH (%)	CO <sub>2</sub> permeability (amol s <sup>-1</sup> m <sup>-1</sup> Pa <sup>-1</sup> )	O <sub>2</sub> permeability (amol s <sup>-1</sup> m <sup>-1</sup> Pa <sup>-1</sup> )	selectivity
9	14.6	258	111	2.3
39	14.6	314	131	2.4
9	85.3	11475	1011	11.3
39	85.3	22353	863	25.9
3	50	317	181	1.7
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24	0	88	77	1.1
24	100	55580	1970	28.2
24	50	536	159	3.3
24	50	545	152	3.5

Original table					
Annotated table					
n°	O <sub>2</sub> Permeability Unit : mol/m/s/Pa	Partial pressure difference Unit : %	Packaging	Relative_Humidity Unit : %	Temp Unit :
1	1.110e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	1.460e+1	9.000e+1
2	1.310e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	1.460e+1	3.900e+1
3	1.011e-15	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	8.530e+1	9.000e+1
4	8.630e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	8.530e+1	3.900e+1
5	1.810e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	3.000e+1
6	2.330e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	4.500e+1
7	7.700e-17	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	0.000e+0	2.400e+1
8	1.907e-14	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	1.000e+2	2.400e+1
9	1.590e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	2.400e+1
10	1.520e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	2.400e+1

- Fully Aliphatic Copolyester
- Gas permeation properties
- Gas transfer properties
- Layer-by-layer assembly
- Mechanical properties
- Metabolix Mvera data
- Morphology and Barrier Properties
- Nanocomposites for Food Packaging
- Oxygen Permeability
- Oxygen and Carbon Dioxide Permeability
- Table 2. Central Composite Design Arrangement and Responses
- Table 2; CO2 permeability
- Oxygen barrier of nanocomposites
- Poly(lactic acid) Nanocomposites
- Polyimide/Silica Composites
- Prediction of water vapor transmission
- PropaFresh P2G
- Quince seed mucilage
- Soluble soybean protein

-  Effect of plasticizer:
-  Evaluation of a Bio-
-  Fully Aliphatic Copo
-  Gas permeation pro
-  Gas transfer proper
-  Layer-by-layer asse
-  Mechanical properti
-  Metabolix Mvera da
-  Morphology and Ba
-  Nanocomposites fo
-  Oxygen Permeabili
-  Oxygen and Carbon
-  Table 2. Central
-  Table 2; CO2 per
-  Oxygen barrier of n
-  Poly(lactic acid) Na

Information about : Table 2. Central Composi

**Table's name :**  
Table 2. Central Composite Design Arrangement and Responses

**Document :**  
Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect of Relative Humidity and Temperature

**Status :**  
annotated

**PermaLink :**

# EXPORT DE DONNEES

1	Document,"Oxygen and Carbon Dioxide Permeability of Wheat Gluten Film: Effect		
2	Table," Table 2. Central Composite Design Arrangement and Responses"		
3			
4	Year,"Journal","Authors","Volume","Issue","User"		
5	1997,"J.Agric.FoodChem.,""H. Mujica-Paz and N. Gontard","45","", "null null"		
6			
7	relation,"O2 Permeability_relation"		
8			
9	type Relative_Humidity,"Val 1 Relative_Humidity","Val 2 Relative_Humidity","uni		
10	scalar,"1.460e+1","1.460e+1","%", "scalar", "9.000e+0", "9.000e+0", "°C", "interva		
11	scalar,"1.460e+1","1.460e+1","%", "scalar", "3.900e+1", "3.900e+1", "°C", "interva		
12	scalar,"8.530e+1","8.530e+1","%", "scalar", "9.000e+0", "9.000e+0", "°C", "interva		
13	scalar,"8.530e+1","8.530e+1","%", "scalar", "3.900e+1", "3.900e+1", "°C", "interva		
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°	O2 Permeability Unit : mol/m/s/Pa	Partial pressure difference Unit : %
	1.110e-16	[ 0.000e+0 ; 1.000e+2 ]
	1.310e-16	[ 0.000e+0 ; 1.000e+2 ]
	1.011e-15	[ 0.000e+0 ; 1.000e+2 ]
	8.630e-16	[ 0.000e+0 ; 1.000e+2 ]
	1.810e-16	[ 0.000e+0 ; 1.000e+2 ]
	2.330e-16	[ 0.000e+0 ; 1.000e+2 ]
	7.700e-17	[ 0.000e+0 ; 1.000e+2 ]
	1.907e-14	[ 0.000e+0 ; 1.000e+2 ]
	1.590e-16	[ 0.000e+0 ; 1.000e+2 ]
0	1.520e-16	[ 0.000e+0 ; 1.000e+2 ]

# QUERY

## Query

- ✓ Define Scope
- ✗ Define Value domains
- ✗ Define Parameters
- Check and Run Query
- Delete Query

## Export

### Query Scope Summary

#### Selected Ontology

MAPOPT

#### Selected Topics

"PackPermeability", "MapOptTopic", "MapOpt\_demo"

#### Selected Relations

CO2 Permeability\_Relation

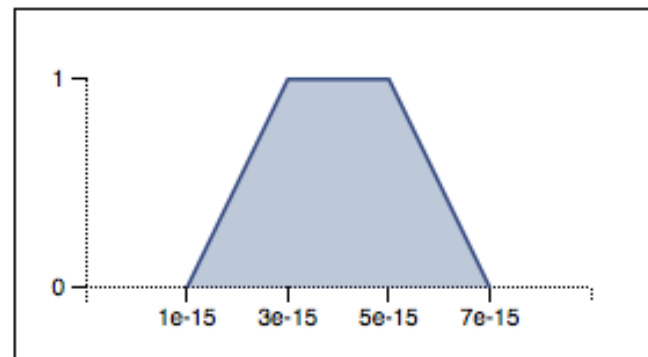
Please note : removing query scope leads to removing all query definition entries including preferences and global parameters.

remove query scope

## Define domain values for attribute CO2 Permeability



### Define numeric value domain



### Select unit

Mole per Meter per second per pascal ▾

best values

min max

1e-15

3e-15

5e-15

7e-15

min

max

acceptable values

Are values...

mandatory ?  desirable ?

save

Cancel

# QUERY: RESULTS

## Query Results (2)

Ontology: MAPOPT - Topics: PackPermeability , MapOptTopic , MapOpt\_demo  
 Relation: CO2 Permeability\_Relation

Mandatory Desirable

rank	reliability score	CO2 Permeability [ 1.000e-15 ; 3.000e-15 ; 5.000e-15;7.000e-15 ] , mol/m/s/Pa	Temperature	Thickness	Relative Humidity	Partial pressure difference	Packaging
row 1_2607	1	[ 1.840e-15 ], mol/m/s/Pa	[ 2.000e+01 ], °C	[ 6.950e+01 ; 7.750e+01 ], μm	[ 7.000e+01 ], %	[ 1.000e+02 ], %	[ Wheat gluten/paper ]
row 5_160	2	[ 1.026e-15 ], mol/m/s/Pa	[ 4.500e+01 ], °C	[ 7.700e+01 ; 8.300e+01 ], μm	[ 5.000e+01 ], %	-	[ Proteins ]

# RELIABILITY/FIABILITE

## Document's criteria values



### Criterion repetition

Experience Repetition : yes

### Criterion number of repetitions

Number of repetitions : unknown

### Criterion age and citation number

Citation Number : more than 40

Age : more than 8 years old

### Criterion age and top citation

## Reliability evaluation's document information



### Reliability results



Low expectation : 4.87 ; High expectation : 5.0

Known criteria values rate : 60 %

**Last evaluation date** : 2014-11-17

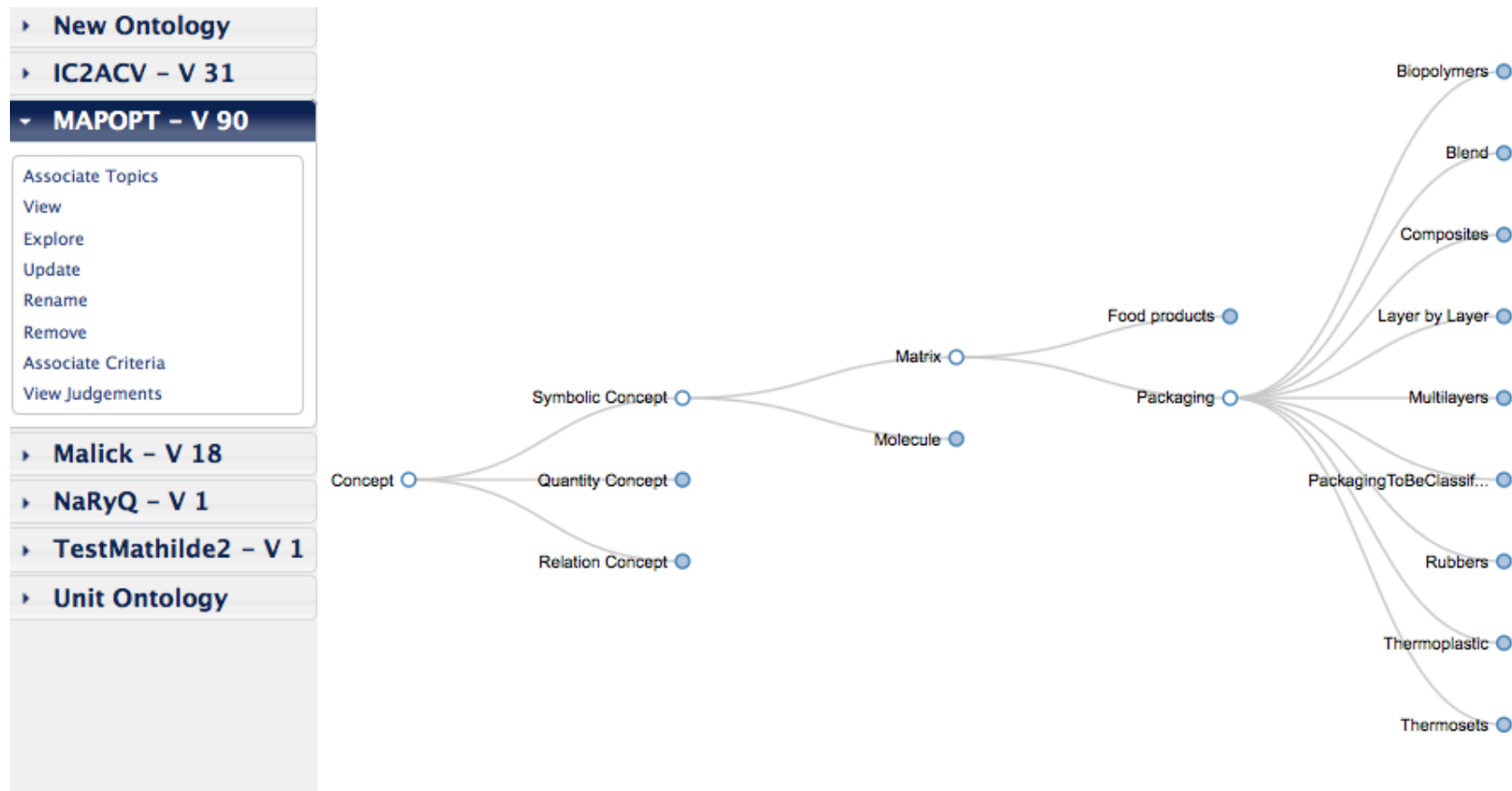


## @Web - un retour sur utilisation

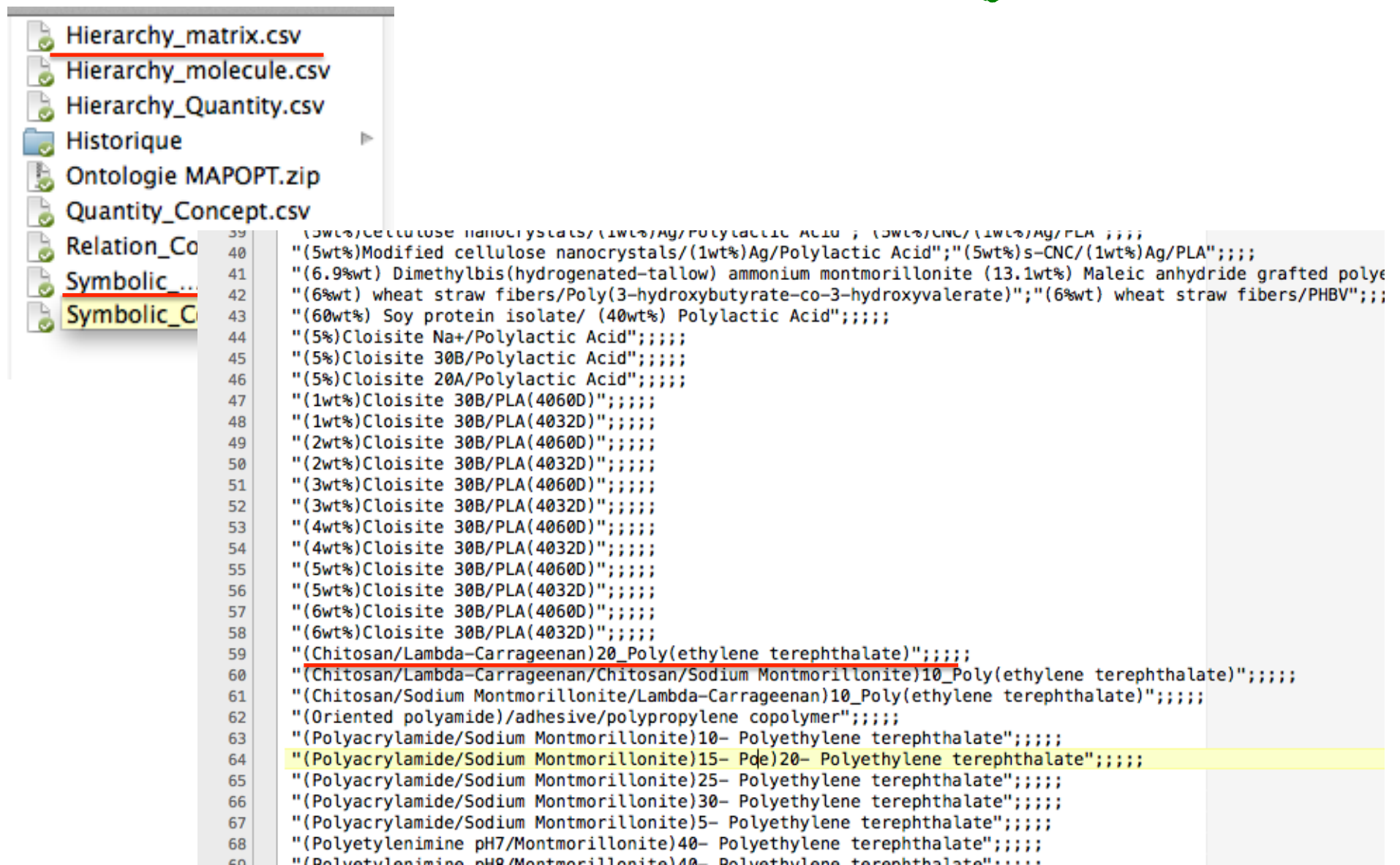
- Utilisateur confirmé → un article 1 à 2 h
  - En pratique: capitalisation d'un article / semaine
  - Mobilisation de l'équipe entière/pHD et post-docs
  - Réseau?
  - Possibilité d'importer directement les bases de données excel existantes?
- Query //5 à 10 min
  - Construction (3 étapes) +interrogation (30' à 1 min) + export des données si besoin

# @Web - un retour sur utilisation

- Utilisateur confirmé → un article 1 à 2 h



# Modification de L'ontologie



The image shows a file explorer on the left with the following files and folders:

- Hierarchy\_matrix.csv
- Hierarchy\_molecule.csv
- Hierarchy\_Quantity.csv
- Historique
- Ontologie MAPOPT.zip
- Quantity\_Concept.csv
- Relation\_Co
- Symbolic\_...
- Symbolic\_C

The main window displays a list of ontology entries, each with a line number on the left and a text description on the right. The entries are:

```
39 (5wt%/cellulose nanocrystals/(1wt%/Ag/poly(lactic acid) ; (5wt%/CNC/(1wt%/Ag/PLA) ;;;  
40 "(5wt%)Modified cellulose nanocrystals/(1wt%)Ag/Poly(lactic acid)";"(5wt%)s-CNC/(1wt%)Ag/PLA";;;;  
41 "(6.9wt) Dimethylbis(hydrogenated-tallow) ammonium montmorillonite (13.1wt%) Maleic anhydride grafted poly  
42 "(6wt%) wheat straw fibers/Poly(3-hydroxybutyrate-co-3-hydroxyvalerate)";"(6wt%) wheat straw fibers/PHBV";;  
43 "(60wt%) Soy protein isolate/ (40wt%) Poly(lactic acid)";;;;  
44 "(5%)Cloisite Na+/Poly(lactic acid)";;;;  
45 "(5%)Cloisite 30B/Poly(lactic acid)";;;;  
46 "(5%)Cloisite 20A/Poly(lactic acid)";;;;  
47 "(1wt%)Cloisite 30B/PLA(4060D)";;;;  
48 "(1wt%)Cloisite 30B/PLA(4032D)";;;;  
49 "(2wt%)Cloisite 30B/PLA(4060D)";;;;  
50 "(2wt%)Cloisite 30B/PLA(4032D)";;;;  
51 "(3wt%)Cloisite 30B/PLA(4060D)";;;;  
52 "(3wt%)Cloisite 30B/PLA(4032D)";;;;  
53 "(4wt%)Cloisite 30B/PLA(4060D)";;;;  
54 "(4wt%)Cloisite 30B/PLA(4032D)";;;;  
55 "(5wt%)Cloisite 30B/PLA(4060D)";;;;  
56 "(5wt%)Cloisite 30B/PLA(4032D)";;;;  
57 "(6wt%)Cloisite 30B/PLA(4060D)";;;;  
58 "(6wt%)Cloisite 30B/PLA(4032D)";;;;  
59 "(Chitosan/Lambda-Carrageenan)20_Poly(ethylene terephthalate)";;;;  
60 "(Chitosan/Lambda-Carrageenan/Chitosan/Sodium Montmorillonite)10_Poly(ethylene terephthalate)";;;;  
61 "(Chitosan/Sodium Montmorillonite/Lambda-Carrageenan)10_Poly(ethylene terephthalate)";;;;  
62 "(Oriented polyamide)/adhesive/polypropylene copolymer";;;;  
63 "(Polyacrylamide/Sodium Montmorillonite)10- Poly(ethylene terephthalate)";;;;  
64 "(Polyacrylamide/Sodium Montmorillonite)15- Pde)20- Poly(ethylene terephthalate)";;;;  
65 "(Polyacrylamide/Sodium Montmorillonite)25- Poly(ethylene terephthalate)";;;;  
66 "(Polyacrylamide/Sodium Montmorillonite)30- Poly(ethylene terephthalate)";;;;  
67 "(Polyacrylamide/Sodium Montmorillonite)5- Poly(ethylene terephthalate)";;;;  
68 "(Poly(ethyleneimine pH7)/Montmorillonite)40- Poly(ethylene terephthalate)";;;;  
69 "(Poly(ethyleneimine pH8)/Montmorillonite)40- Poly(ethylene terephthalate)";;;;
```

# Modification de L'ontologie

Hierarchy\_matrix.csv  
Hierarchy\_molecule.csv  
Hierarchy\_Quantity.csv  
Historique  
Ontologie MAPOPT.zip  
Quantity\_Concept.csv  
Relation\_Concept.csv  
Symbolic ...t\_matrix.c  
Symbolic\_Concept\_m

ère  
ographie  
13  
asedonnées  
...s/transferts

fiches\_for  
Ontologi  
publicati  
Respiring  
xls\_data  
xls\_data

**New Ontology**

from OWL  
from CSV

IC2ACV - V 31  
MAPOPT - V 90  
Malick - V 18  
NaRyQ - V 1  
TestMathilde2 - V 1  
Unit Ontology

Nouveau dossier avec la sélection  
Ouvrir  
Ouvrir avec  
Placer dans la corbeille  
Lire les informations  
**Compresser 7 éléments**  
Graver 7 éléments sur disque...  
Dupliquer  
Créer un alias  
Coup d'œil sur 7 éléments  
Partager  
Copier 7 éléments  
Afficher les options de présent  
Tags...  
Symantec: fichiers sélectionnés  
Open File in TextWrangler  
Afficher dans le Finder

**CSV Concept File :**  
Parcourir... Aucun fichier sélectionné.

**CSV Hierarchy File :**  
Parcourir... Aucun fichier sélectionné.

Or

**Zip File :**  
Parcourir... Aucun fichier sélectionné.

Add



# Annotations

Manual Annotation of Table 1. Oxygen Transmission Data for 40-Bilayer Assemblies Made with Clay and PEI at Varying pH Levels

- Original table

permeability ( $\times 10^{-6}$ cc/(m·day·atm))					
40-BL assembly	OTR (cc/(m·day·atm))	film thickness (nm)	film <sup>a</sup>	total	Cussler's $\alpha$ predictions <sup>b</sup>
PEI <sub>7</sub> /MMT	8.42	48.02	48.55	1507.36	

Manual Annotation of Table 2. Central Composite Design Arrangement and Responses

- Original table

- Annotated table

n°	O2 Permeability Unit : mol/m/s/Pa	Partial pressure difference Unit : %	Packaging	Relative_Humidity Unit : %	Temperature Unit : °C	Thickness Unit : µm
1	1.110e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	1.460e+1	9.000e+0	[ 7.700e+1 ; 8.300e+1 ]
2	1.310e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	1.460e+1	3.900e+1	[ 7.700e+1 ; 8.300e+1 ]
3	1.011e-15	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	8.530e+1	9.000e+0	[ 7.700e+1 ; 8.300e+1 ]
4	8.630e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	8.530e+1	3.900e+1	[ 7.700e+1 ; 8.300e+1 ]
5	1.810e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	3.000e+0	[ 7.700e+1 ; 8.300e+1 ]
6	2.220e-16	[ 0.000e+0 ; 1.000e+2 ]	Wheat gluten (20% glycerol - casting)	5.000e+1	4.500e+1	[ 7.700e+1 ; 8.300e+1 ]

## @Web - un retour sur utilisation

- Pouvoir ajouter un nom de concept directement lors de la saisie // sans intervenir sur les fichiers .csv
- Automatiser l'import de tableau excel
- Automatiser l'import de tableau html?
- Comment faire vivre l'outil?
  - Au delà des développements méthodo
  - Quel communauté? (académique uniquement?)
  - Quel support?